

***STATEWIDE  
ROAD SYSTEM -  
EXPRESSWAY  
IMPROVEMENTS***

## ***ELECTRONIC TOLL COLLECTION (ETC) IMPLEMENTATION***

**PROJECT SCOPE/DESCRIPTION:** Computer technology is being utilized on our Toll Roads, I-95 and SR-1, to process electronic toll collections (ETC) for our customers. This process is employed by the use of transponders placed in our customer's vehicles (auto, van, truck, and etc.) and detection devices that read the transponder signal at all Toll Collection Plazas and Ramps. The customer's Toll account is charged automatically each time the vehicle passes a Plaza or Ramp detection device. ETC was implemented on I-95 at Newark in November of 1998 and on SR-1 at Dover to Smyrna in January of 1999 and at Biddle's Corner to Odessa in November of 1999. The toll fee was increased to \$2.00 per vehicle for two axle vehicles (auto, pickup, etc.) on I-95 in January of 1999. To help convert traffic to ETC we offered the old rate of \$1.25 for all of our ETC customers. The Biddle's Corner Plaza was built with a Highway Speed dedicated travel lane that offers our ETC customers the option to maintain their travel speed while paying their toll automatically. All other collection points in our system make all customers either stop or reduce speed significantly, suggested speed using the ETC lanes is 10 MPH.

- Highway speed lane / improved throughput – Our plan is to install Highway speed lanes at the two remaining Toll Plazas at Newark and Dover. This is expected to increase traffic flow and reduce our need for manual toll collection.
- Plaza Facilities – Placing Highway speed lanes in the Newark facility on I-95 will cause significant redesign of the entire toll plaza. It is expected to cause the current structure to be completely removed and rebuilt.

**PROJECT JUSTIFICATION:** By installing Highway Speed lanes we will reduce the congested collection processes at Newark and Dover and improve customer satisfaction. Our customers will be able to maintain their travel speeds and enjoy a reduced fare. Manual toll collection is a slow task, even with the best equipment and highly experienced collectors we only average a 325-350 vehicles per hour process rate. Traffic approaches the toll plaza, under normal highway conditions, at a rate of 1,600 – 1,800 vehicles per hour causing a bottleneck condition. Installation of three or more Highway Speed lanes will provide a long-term solution and eliminate much of the current manual collection process. Projected growth is over 2% annually on these toll roads.



|                                 |                          |
|---------------------------------|--------------------------|
| <b>County:</b>                  | Statewide                |
| <b>Municipality:</b>            |                          |
| <b>Funding Program:</b>         | Road System – Expressway |
| <b>Functional Category:</b>     | Management               |
| <b>Representative District:</b> | Statewide                |
| <b>Senatorial District:</b>     | Statewide                |

***ELECTRONIC TOLL COLLECTION (ETC) IMPLEMENTATION (CONTINUED)***

***Traffic Volumes***

|               | <b>1995</b> | <b>1996</b> | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>Average Growth</b> |
|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|
| <b>SR 1</b>   |             | 5,297       | 8,496       | 9,418       | 9,668       | 16,444      | 23,408      | 36.00%                |
| <b>I-95</b>   | 23,451      | 23,848      | 24,712      | 25,340      | 25,837      | 26,138      | 26,724      | 6.71%                 |
| <b>Total</b>  | 23,451      | 29,145      | 33,208      | 34,758      | 35,505      | 42,582      | 50,132      | 8.14%                 |
| <b>Growth</b> |             | 24.3%       | 13.9%       | 4.7%        | 2.1%        | 19.9%       | 17.7%       |                       |

| <b>INDIVIDUAL<br/>PROJECT<br/>SEGMENTS</b>           | <b>PHASE</b> | <b>FUNDING</b>         | <b>EST COST TO<br/>COMPLETE<br/>IN TODAY'S \$</b> | <b>FY 2001<br/>7/00-6/01</b> | <b>FY 2002<br/>7/01-6/02</b> | <b>FY 2003<br/>7/02-6/03</b> | <b>FY 2004<br/>7/03-6/04</b> | <b>FY 2005-2007<br/>7/04-6/07</b> |
|--|--------------|------------------------|---|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------------|
| Toll Plaza Mod's for High Speed I-95                 | PE<br>C      | 100% ST<br>80% F - Q24 | 523<br>4,919                                      | 523                          |                              |                              | 4,919                        |                                   |
| I-95 Toll Plaza Phase III, Canopies,<br>Bumpers, Gap | C            | 100% ST                | 500   | 500                          |                              |                              |                              |                                   |
| Snow Removal Equipment - UNIMOGS                     | PRO          | 100% ST                | 375   | _____                        | _____                        | _____                        | <u>375</u>                   |                                   |
|  |              | <b>TOTAL</b>           | <b>6,317</b>                                      | <b>823</b>                   | <b>1,000</b>                 | <b>4,919</b>                 | <b>375</b>                   |                                   |

***All \$ X 1,000***

**PAVEMENT RESURFACING - EXPRESSWAYS**

**PROJECT SCOPE/DESCRIPTION:** Resurfacing of all state-maintained roadways except for Suburban Streets. Locations for each year are determined after each spring's inspection.

There are many types of resurfacing treatments, which may vary by materials and depth of improvement. Expressways are usually rotomilled and overlaid with hot-mix at a cost of \$250,000 per lane mile. In addition to this baseline estimate, an additional 15% is normally added for construction engineering and/or the construction management expenses associated with a contract.

**County:** Statewide  
**Municipality:**  
**Funding Program:** Road System – Expressways  
**Functional Category:** Preservation  
**Representative District:** Statewide  
**Senatorial District:** Statewide

| FMB ID<br>OR<br>PROJ # | FUNDING    | EST COST TO<br>COMPLETE<br>IN TODAY'S \$ | FY 2001<br>7/00-6/01<br><br>TOTAL | FY 2002<br>7/01-6/02<br><br>TOTAL | FY 2003<br>7/02-6/03<br><br>TOTAL | FY 2004<br>7/03-6/04<br><br>TOTAL | FY 2005-2007<br>7/04-6/07<br><br>TOTAL |
|------------------------|------------|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|
|                        | 100% State | 2,105                                    |                                   |                                   | 421                               | 421                               | 1,263                                  |
|                        | TOTAL      | <u>2,105</u>                             |                                   |                                   | <u>421</u>                        | <u>421</u>                        | <u>1,263</u>                           |

*All \$ X 1,000*

***SR 1, SOUTH OF DOVER TO SOUTH OF CHESAPEAKE AND DELAWARE CANAL***

**PROJECT SCOPE/DESCRIPTION:** Construction on the final major sections of this limited access highway connecting Dover to I-95 is currently under construction. The entire roadway will be open by May 2003.

**PROJECT JUSTIFICATION:** To alleviate congestion on US 13 and provide a continuous limited-access highway between I-95 and Dover.

**County:** Statewide  
**Municipality:**  
**Funding Program:** Road System – Expressways  
**Functional Category:** Expansion  
**Representative District:** Statewide  
**Senatorial District:** Statewide



*Blackbird area South of SR 71*

*Black Diamond Road, North of Smyrna*

*Sandom Branch over US 13*



***SR 1, SOUTH OF DOVER TO SOUTH OF CHESAPEAKE AND DELAWARE CANAL (CONTINUED)***

***Funding Information***

| FMB ID<br>OR<br>PROJ # | INDIVIDUAL<br>PROJECT<br>SEGMENTS | PHASE      | FUNDING                | EST COST<br>COMPLETE<br>IN TODAY'S | FY 2001<br>7/00-6/01<br>TOTAL | FY 2002<br>7/01-6/02<br>TOTAL | FY 2003<br>7/02-6/03<br>TOTAL | FY 2004<br>7/03-6/04<br>TOTAL | FY 2005-2007<br>7/04-6/07<br>TOTAL |
|------------------------|-----------------------------------|------------|------------------------|------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------------|
| 83-110-01              | Mainline PE                       | PE         | 100% ST                | 1,500                              | 500                           | 1,000                         |                               |                               |                                    |
| 83-110-02              | Mainline R/W                      | ENV<br>R/W | 100% ST<br>100% ST     | 500<br>100                         | 500                           | 100                           |                               |                               |                                    |
| 87-110-01              | Construction Coordination         | PE<br>C    | 100% ST<br>50% F – 33D | 755<br><u>3,270</u>                | 755<br>_____                  | <u>1,620</u>                  | <u>1,140</u>                  | <u>450</u>                    | <u>60</u>                          |
|                        |                                   |            | TOTAL                  | 6,125                              | 1,755                         | 2,720                         | 1,140                         | 450                           | 60                                 |

***All \$ X 1,000***